



POLYONICS

PolyFLEX Substrates

XF-118

2 mil Polyimide ESD-Safe™ Film

Description:

POLYONICS PolyFLEX™ XF-118 is a 2 mil (50µm) polyimide film with a durable HardCoat™ ESD-Safe non-metallic static dissipative coating.



Features:

- Static Dissipative
- Low charging
- REACH and RoHS compliant
- Dimensionally stable at high temperatures
- Chemically resistant

Applications:

- Static dissipative packaging, wraps, protective layers, barriers, printed electronics, etc.

Technical Data

PROPERTIES	TEST METHODS	AVERAGE RESULTS	
		Value	Units
<b>Thickness</b>	ASTM D1000		
	2 mil Polyimide	0.002 (50)	Inch (µm)
	ESD topcoat	0.0003 (7.6)	
	Total	0.0023 (57.6)	
<b>Surface Resistance</b>	EOS/ESD STM11.11	>10 <sup>4</sup> and < 10 <sup>9</sup> Ohms	
<b>ESD Surface Durability</b>	ASTM D4752-10	>500 Double IPA Rubs	
<b>Thermal Expansion</b> 2 mil Polyimide	TMA	32	PPM/degree Celsius
<b>Thermal Conductivity</b> 2 mil Polyimide	ASTM F-433-77 (1987)	0.12	W/m•K
<b>Tensile Strength</b> 2 mil Polyimide	ASTM D882	140	MPa
<b>Tear Strength initial</b>	ASTM D-1004-90	16.3	N
<b>Tear Strength Propagating</b>	ASTM D-1922-89882	0.21 (0.06)	N (lbf)
<b>Tensile Modulus</b> 2 mil Polyimide	ASTM D882	3.1	GPa
<b>Elongation</b> 2 mil Polyimide	ASTM D882	60%	@ 20C
<b>Volume Resistivity</b> 2 mil Polyimide	ASTM D-257	10 <sup>13</sup>	Ohm-cm
<b>Breakdown Voltage</b> 2 mil Polyimide	ASTM D-149	5.0 (200)	kV/mil (kV/mm)



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Durability Testing

Table with 4 columns: Properties, Test Method, Test Fluid, Results. Rows include Chemical Resistance, Weathering Test, Temperature Rating (Long Term, Operating, Short Term), and Shelf Life.

Polyonics Material Compliance

Table with 2 columns: Compliance Standard (RoHS, REACH, Halogens) and Description of limits.

All SI units are mathematically derived from U.S. conventional units.

NOTE: All values shown are averages and should not be used for specification purposes. Test data and test results contained in this document are for general information only...

References:

ASTM: American Society for Testing and Materials (U.S.A.) SI: International Systems of Units.

Trademarks:

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The above warranties extend solely to Buyer and all warranty claims must be made by the Buyer. Rework or Replacement shall neither exceed nor decrease the original warranty period.

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